

# ***///ESPRI7 748ES***



## **Installation Manual**

**VERSION 3.10**


**P ▲ R ▲ D O X**  
**S E C U R I T Y S Y S T E M S**



## Requirements and guidelines for U.L. INSTALLATIONS

UL listed in accordance with standard **UL1023** (Household Burglar - Alarm System Units), standard **UL985** (Household Fire Warning Units) and **UL1635** (Digital Alarm Communicator System Units).

UL has only evaluated the 708, 728, 728 EXPRESS, 738, 738 EXPRESS, 748 and 748ES for compatibility with the Ademco model 685, FBI model CP220FB, SUR-GUARD SG-MLR2-D6 and Silent Knight model 9000.

Look for the  mark on product. Only products bearing this mark are UL listed.

Some operational features are not permitted in UL installations. To respect the standards for household applications, the installer should follow these guidelines when configuring the system.


1. ALL components of the system should be UL listed for the intended application.
2. If the installation is a FIRE ALARM application, refer to NFPA Standard 74 for details on locating smoke detectors. There must be at least one UL-Listed Indoor Fire Alarm Warning Signaling Appliance.
3. For U.L. Burglar Applications:
  - Maximum entry time = 45 seconds
  - Maximum exit time = 60 seconds
  - Minimum bell cutoff time = 4 minutes
4. Models 629, 633, 639, are not UL listed.
5. The upload/download software should not be used on UL listed systems.

## Requirements and Guidelines for AUSTEL INSTALLATIONS

Austel-approved installations: use a transformer approved by the State Electricity commission, such as "Dyen" PA series 15VAC 22VA. With this transformer, do not exceed the following maximum currents: - maximum Auxiliary current (including keypads): 300mA  
 - maximum Bell current :600mA

## Requirements and Guidelines for ULC INSTALLATIONS

When the system controls a fire alarm system, wiring method must correspond to section 32 of the Canadian Electrical Code.

Look for the  mark on product. Only products bearing this mark are ULC listed.

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## **/// INTRODUCTION**

Thank you for placing your trust in the **Esprit 748ES** control panel. You've chosen a sophisticated, user-friendly control panel designed to meet all of your technological, performance and security requirements.

We hope that the important features of the **Esprit 748ES**, which include a 256-event, PC-uploadable event buffer and high-speed pre-programmed communicator formats, will simplify your task of supplying quality security service to your customers.

### **ABOUT PARADOX**

We do our best to develop technologically-advanced products. If you have any comments or suggestions, or if you require additional technical assistance, please contact your local distributor. Every effort has been made to ensure that your distributor's staff has received complete training from Paradox Security Systems so that you receive prompt and effective service.

### **ABOUT THIS MANUAL**

This installation manual has been created to provide you with the information you will need to understand panel operation, features and functions. It expands on the directions found in the **"Programming Guide"**. Even if you are familiar with other security control panels, we recommend that you read this manual at least once to familiarize yourself with panel features. Please refer to the index for a complete list of manual contents.

## **FEATURES**

### **Reliability**

The superior capabilities of the 748ES are driven by leading edge hardware. Use of the most powerful RISC processors on the market, with built-in "Analog to Digital" converters and SMD Technology, means this control panel has 30-40% fewer components than any previous generations.

### **Total Compatibility**

All programming, comprehensive system features, and upload/download software of Esprit panels are identical. This total compatibility significantly reduces the time required to conduct training, programming and system upgrades. There's just one set of procedures for all Esprit panels.

### **User-friendly Operation**

The reduced number of steps required to program the 748ES via a keypad speeds up installation. End-user access to most system functions calls for just one touch of the keypad. A "streamlined programming" feature further simplifies the programming process, by saving data automatically and leading the installer through the programming addresses without the need to enter them manually.

### **False Alarm Prevention**

Important advances have been made in Esprit control panel technology which guarantee exceptional levels of false alarm protection. A full range of high tech features dramatically reduce the frequency of false alarms. These easy to use tools include "Intellizone" definition, "Auto Zone Shutdown", "Beep On Exit Delay" "Programmable Delay before Alarm Transmission" and "Recent Closing Report".

### **Flexible System Partitioning**

Each control panel can be used to monitor two distinct security systems. Partitioning provides a practical and flexible solution in situations where combined systems are a necessity. User-friendly Esprit partitioning does it all with just one access code. Protected area zones can be defined as belonging to System "A", System "B", both systems (dual area), or given no system assignment (common area).

### **High-Speed Preprogrammed Communication**

Esprit panels can slash set-up and reporting time by transmitting preprogrammed and high-speed communicator formats.

## Event Buffer and “Real Time” Clock

Incorporation of a “real time” clock permits the creation of a 256 event, PC uploadable buffer with time and date. Two automatic arming options are made possible by the inclusion of the “real time” clock. Auto arming can be programmed to take place at a specific time, or following a set time period without any zone activity (auto arm and/or report only).

## Programmable Outputs

Almost any control panel status situation may be used to activate the Esprit’s programmable outputs. Once a panel status mode is selected for a PGM to follow, the polarity and duration of the output may also be programmed. 18 supplementary programmable outputs are available with the SRI18 module, which connects to the panel’s serial output.

## Espload Upload/Download Software

Espload upload/download software revolutionizes control panel supervision by offering powerful panel programming, modification, real-time monitoring and data management tools. It functions with most Hayes-compatible modems, requires only 2 minutes to perform a full upload or download, and is extremely simple to learn and operate. (Upload/download software is not permitted on UL installations.)

## SPECIFICATIONS

### Inputs and Outputs:

Maximum Zones:	Varies according to control panel/keypad combination. <b>639/640 LCD keypads:</b> (See “Keypad Connections”, page 8.) <b>616/626/633 LED keypads:</b> (See “Keypad Connections”, page 8.) 748ES: <b>24</b> zones (24 onboard zones, including 2 keypad zones)
Zone Configuration:	N.C. (no resistors), EOL (1 resistor), (Zone configuration programmed at address <b>088</b> )
Battery Charger:	13.8VDC, adjustable, selectable 360mA or 700mA, 5A fuse protection and charging indicator.
Aux power:	1.2A at 12.5VDC, fuseless electronic shutdown at 3A, Automatic restore
Bell Out:	3A, Fuseless electronic shutdown at 3A, Automatic restore
AC input:	16.5 Vac, 40VA, 50 - 60Hz
PGM outputs:	More than 1000 options to follow 2 operation modes: Timed (1 sec.- 2 hrs.) or following predetermined condition. N.C. or N.O to ground, 50mA* Max. (*UL tested for 30mA only) Can also be remote-controlled by PC using Espload.
Serial Data Output:	(1200, 1, N) for use with accessory modules (not UL systems).

### Event Buffer:

256 event buffer with time and date.

### Operating Modes:

49 user (2 Master codes), 4 or 6 digit codes.  
Partitioning to System “A”, System “B”, both systems (dual area), or no system assignment (common area).  
Regular, “Stay” (at Home) arming, “Double Stay” (no delay) arming, Force “Away” arming.  
Fast “One key Full Arm”, “One key Stay Arm” and “One key Exit”.  
Key Switch Arm/Disarm (“stay” or “regular” mode).  
PS1 bedside remote.  
3 keypad-activated panic alarms.  
Real Time Clock for “list of events”, auto arming and test reports.  
Auto arm on “time” or “no zone activity delay time”.

## Digital Communicator:

Compatible with most worldwide telecommunication standards.

Reporting formats:

Pulse: Ademco slow (10BPS), Silent Knight fast, SESCOA (20 BPS), Radionics (40 BPS),  
Radionics with parity (40 BPS), 1400Hz - 1800Hz (10 BPS).

DTMF: Ademco Express, Ademco Contact ID (all codes and programmable), "No handshake" DTMF.

True Dial tone detection and telephone line monitoring.

Fully up/downloadable with PC.

Regular, Split and Double reporting modes.

"Programmable Delay before Alarm Transmission" option.

## Esplod

Upload/download PC software.

Provides fast up/download at 300 bps.

Permits creation of unlimited number of account and panel default files.

Powerful "monitoring" mode supervises all panel activity.

"Scheduler" activates panel features at preprogrammed intervals.

"Batch" mode carries out tasks following panel call.

## Accessory Modules:

**SRI 18:** 18 PGM outputs, **708:** Secondary Digital Dialer (UL listed)

**708DV:** DVACS communicator (Canada only), **Esprint:** Parallel printer interface.

## Keypads:

616, 626, 629 and 633 (LED) keypads. 639 and 640 (LCD) keypads, PS1 bedside remote.

(For UL systems use only 616, 626, 640 or PS1.)

## Current Consumption:

(measured with battery connected, without AC and with 1K $\Omega$  resistor on bell and 1K $\Omega$  resistor on zones.)

<b>748ES</b> control panel:		95mA <sub>DC</sub> (in standby mode, using 1 keypad)	
		145mA <sub>DC</sub> (in reporting mode, using 1 keypad)	
<b>616/626</b> LED keypads:	15mA <sub>DC</sub> Typical	<b>Esprint</b> printer module:	35mA <sub>DC</sub> Typical
	30mA <sub>DC</sub> Maximum	<b>PS1</b> bedside remote:	15mA <sub>DC</sub> Typical
<b>629</b> access control keypad:	30mA <sub>DC</sub> Typical		20mA <sub>DC</sub> Maximum
	55mA <sub>DC</sub> Maximum	<b>708</b> comm. module:	35mA <sub>DC</sub> Typical
<b>633</b> LED keypad:	15mA <sub>DC</sub> Typical		75mA <sub>DC</sub> Maximum
	35mA <sub>DC</sub> Maximum	<b>708 DV</b> comm.module:	70mA <sub>DC</sub> Typical
<b>639/640</b> LCD keypads:	20mA <sub>DC</sub> Typical		105mA <sub>DC</sub> Maximum
	70mA <sub>DC</sub> Maximum	<b>SRI-18:</b>	46mA <sub>DC</sub> Typical
			135mA <sub>DC</sub> Maximum

## /// **BASIC INSTALLATION**

### LOCATION AND MOUNTING

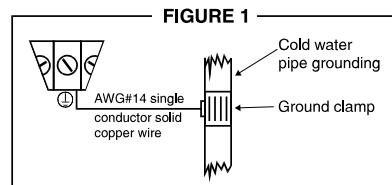
Remove the printed circuit board, mounting hardware and keypad from the packaging inside the panel box. **Press the five white nylon mounting studs into cabinet from the back before mounting the cabinet.** Before mounting circuit board on the back of the cabinet, pull all cables into cabinet and prepare them for connection.

Select a control panel installation site that is not easily accessible to intruders. Leave at least 2" around the panel box to permit adequate ventilation/heat dissipation. Installation location should be dry, close to an AC source, ground connection and a telephone line connection.



## EARTH GROUND

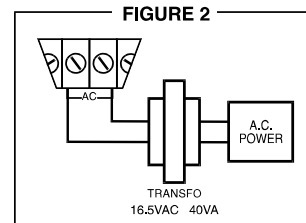
The earth terminal should be connected to the cabinet and grounding rod as per local electrical codes.



## AC

Use a 16.5VAC (50-60 Hz) transformer with a minimum 40VA rating to provide sufficient AC power. Do not utilize any switch-controlled outlets to power the transformer. UL listed systems require K12 model T16V40 transformer, ULC listed systems require Frost model FTC 1637 transformer.

**Warning: Do not connect transformer until all wiring is completed.**



## PROGRAMMABLE OUTPUTS

Two fully programmable outputs (PGM1 and PGM2) are available on this panel. Each is able to follow more than a thousand different combinations. Please use a relay if more than 50mA is needed.

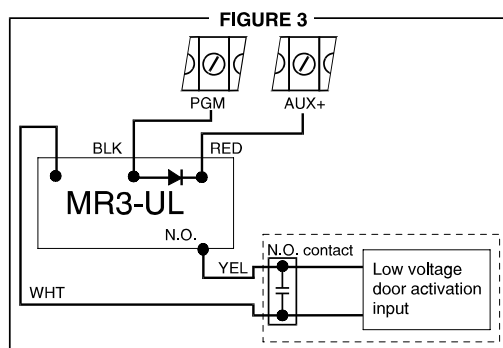
Example: To program PGM1 to open/close an automatic garage door when keys [3] and [6] are pressed at the same time:

Address **039**: [6] [2ND]

Address **040**: [5] [8]

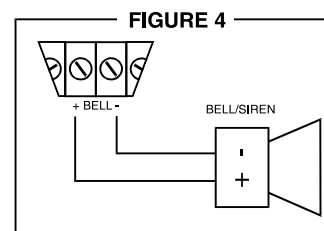
Address **042**: [1] [1]

Address **056**: [10] [10] [1]



## BELL/SIREN OUTPUT

Bells or other warning devices requiring a steady voltage output during alarms, are powered by the **Bell+**/ **Bell-** terminals. The bell output is microprocessor-controlled and will automatically shut down if current exceeds 3 amps. The processor will allow current to resume as soon as another alarm is triggered. The correct polarity connections should be made when hooking up sirens (speakers with built-in siren drivers). “**Bell+**” terminal is the connection for the positive lead. “**Bell-**” terminal is the connection for the negative lead. The bell output supplies 12V upon alarm. It can support two 20-watt or two 30-watt sirens. (Above 1A, battery supplies current.)



## AUXILIARY POWER TERMINALS

Motion detectors and any security devices requiring 12VDC voltage can be powered by the auxiliary power supply. A maximum of 1.2A, 12VDC is available from the AUX+ and AUX- terminals (250mA 12VDC for 24hr standby for UL/ULC installations). For each **additional** keypad or PS1 module, the auxiliary supply must be reduced by the corresponding keypad current consumption value. (See “Current Consumption”, page 6). The auxiliary supply is microprocessor-protected against current overload and automatically shuts down if current exceeds 3 amps. Auxiliary power will resume after battery test takes place (within 1 - 60 seconds).

## KEYPAD CONNECTIONS

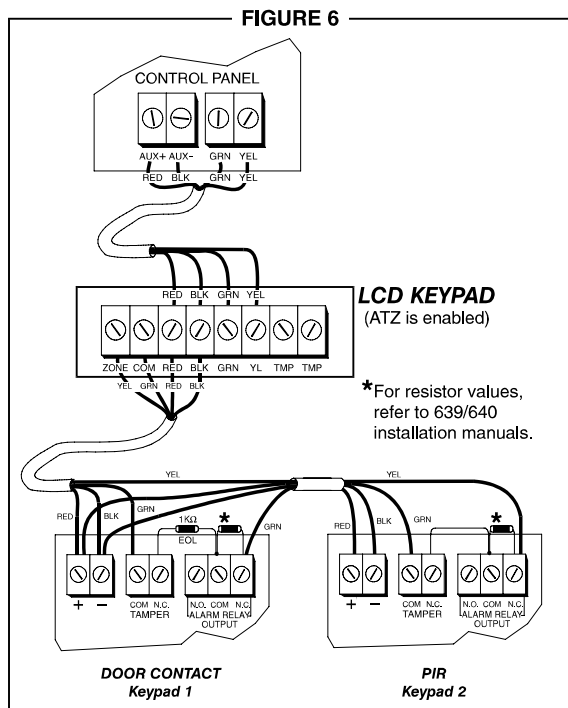
### Panel/keypad connection:

The two keypad connections labeled GRN (green) and YEL (yellow) should be connected to the corresponding colour terminals on the control panel PC board. Two keypad connections labeled RED and BLK (black) should be connected to the control panel PC board terminals labeled "Aux +" and "Aux -" respectively.

### Keypad zone connection:

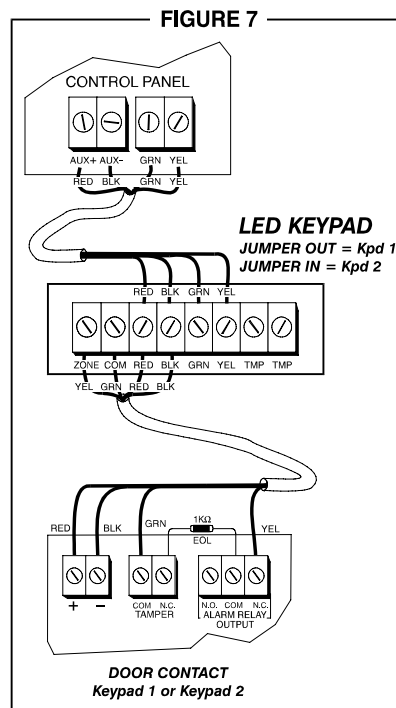
The two connections labeled "zone" and "com" are used to connect a zone to the keypad. Up to 5 keypads may be connected to the control panel but only two (2) keypad zones (Keypad 1 and Keypad 2) can be active at any one time. Examples of keypad zone connection possibilities (depending on type of keypad used) are shown below:

### 639/640 LCD keypads



**Note:** the 640 keypad can be used with the 748ES panels but will not display correct event list codes.

### 616/626/633 LED keypads



To disable the keypad zone (when keypad zone supervision is deactivated):

**616/626:** Connect the blue wire "ZONE" to the black wire "COM" and remove EOL jumper 2.

**633/639/640:** Connect a 1kΩ resistor between the zone terminal and the com terminal.

## ZONE INPUT TERMINALS

The system hardware will recognize the following conditions for each zone:

### Single Zone Connections

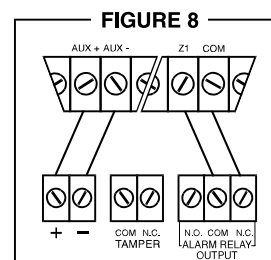
Note: Keypad zones always use a 1KΩ EOL resistor.

**ZONE connection, without EOL resistor (N.C. contacts)**

address **088**, key [MEM] = "on"

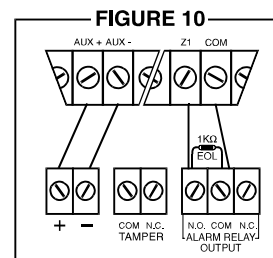
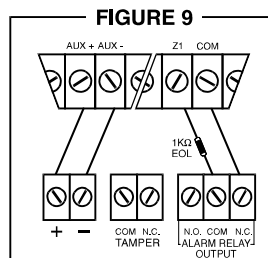
key [10] = "off" (default)

key [11] = "off" (default)



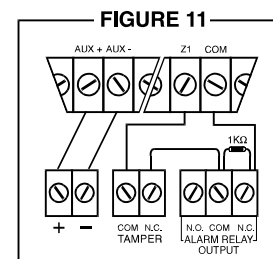
**ZONE connection, with EOL resistor  
(N.C. and N.O. contacts) (UL/ULC Configuration)**

address **088**, key [MEM] = "off" (default)  
key [10] = "off" (default)  
key [11] = "off" (default)



**ZONE connection, without EOL resistor, with tamper recognition  
(N.C. contacts)**

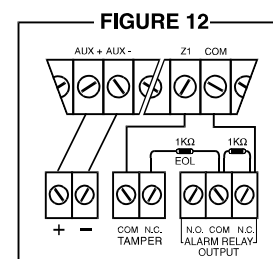
address **088**, key [MEM] = "on"  
key [10] = See "Tamper/wire Fault Definitions  
and Options"  
key [11] =



**ZONE connection, with EOL resistor, with tamper recognition and with wire  
fault (short circuit) recognition (N.C. contacts) (UL/ULC Configuration)**

address **088**, key [MEM] = "off"  
key [10] = See "Tamper/wire Fault Definitions  
and Options"  
key [11] =

Tamper/wire fault transmits separate code.



## TAMPER/WIRE FAULT DEFINITIONS AND OPTIONS

When using 2 zone resistors, the panel offers four possible definitions for tamper/wiring recognition, independent of zone definition.

**"Tamper/wire" disabled** (Address **088**, Key [10] "off", Key [11] "off")

Tamper/wiring failure recognition is disabled. (Not allowed by UL listed systems, must be enabled.)

**"Trouble" enabled** (Address **088**, Key [10] "off", Key [11] "on")

Tamper/wiring failure will generate an alarm, when armed. A trouble report code will be sent to the central when disarmed.

**"Silent alarm" enabled** (Address **088**, Key [10] "on", Key [11] "off")

Tamper/wiring failure will generate a silent alarm (no siren) when the system is disarmed. Alarm and trouble report codes will be sent to the central, when the system is armed.

**"Audible alarm" enabled** (Address **088**, Key [10] "on", Key [11] "on")

Tamper/wiring failure will generate an audible alarm armed or disarmed (siren). Alarm and trouble report codes will be sent to the central.

**Exception:** When the zone definition is "24 hour", the tamper definition follows the audible/silent alarm arm definition of the "24 hour" zone.

**Tamper recognition addresses:**

Tamper report and restoration codes should be programmed at addresses **472-495** and **510**.

## FIRE CIRCUIT

The **fire** zone (enabled by defining zone 3 as "24 hour") should always be connected with a **1K $\Omega$  EOL** resistor (PN201100200-PRT on UL systems). If there is a line short in the fire zone, a fire alarm will be generated. If the line is "open", a "fire loop" trouble report will be sent to the central and trouble indicator [11] will illuminate on the LED keypad.

For UL/ULC installations, a 4 wire, latching, smoke detector (UL - Falcon Model 5454, ULC - BRK Model 2412) must be used. To supervise power supply, an "end of line" relay (Model MR3) is installed. This relay's contacts will cause a FIRE TROUBLE in the event the power is interrupted.

To reset (unlatch) smoke detectors after an alarm, power to detectors must momentarily be interrupted. To do so, connect the negative (-) side of smoke detector power to PGM1. PGM1 should then be programmed "Timed N.C." (normally closed), programmed to "open" when any two keys on the keypad are pressed simultaneously.

### Example:

To program **PGM1** to conduct smoke detector reset when [CLEAR] and [ENTER] are pressed at the same time.

Address **039** = [BYP] [2ND]

Address **040** = [5] [10]

Address **042** = [2ND] [6]

Address **056** = [10] [10] [4]

FIGURE 13

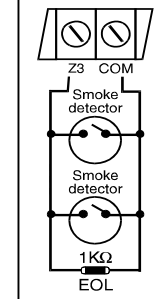
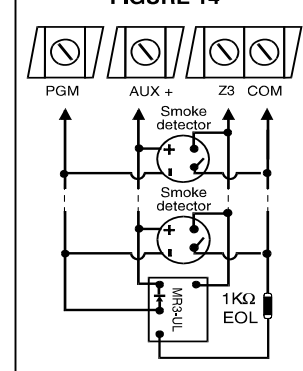


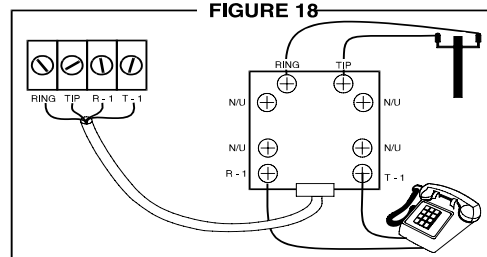
FIGURE 14



## TELEPHONE LINE CONNECTION

Connect the incoming telephone company wires into "TIP" and "RING". Wires should then be run from "T1" and "R1" to the installation's phone system.

FIGURE 18



## POWERING UP THE UNIT

When keypads are installed far from the control panel, a keypad should be temporarily connected close to the panel to conduct "power-up" testing. Connect the transformer. After 10 seconds, begin testing the unit. Enter random commands on the keypad. It should "beep" in response to these commands. Open a zone to ensure that keypad and panel are responding to signals. If the keypad does not respond and indicator lights do not illuminate, check for AC voltage at the "AC" terminals. If 16VAC is flowing, then keypad wiring should be verified. Also check for a short between "black" and "red" keypad wires.

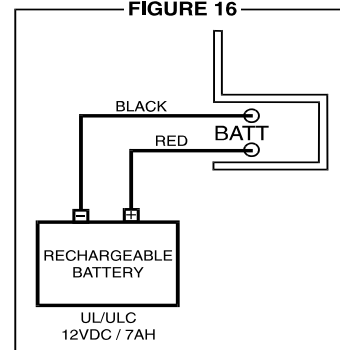
## Panel Programming Methods

To conduct panel programming, use the keypad or initiate communication with Espload (see below). Use of **Espload** is highly recommended, as it greatly reduces the potential for data entry errors during programming. For Keypad Programming instructions, refer to "Programming Guide".

### Battery Hook-Up (required on UL/ULC installations)

Use a 12VDC 7AH rechargeable acid/lead or gel cell battery. Connect "red" battery lead to positive battery terminal, and "black" battery lead to negative battery terminal. Reversed connections will blow the battery fuse. Battery should not be connected until AC panel connections have been made. [TRBL] key should illuminate. Pressing [TRBL] causes key [8] to illuminate (trouble indicator for "timer loss"). (See "Trouble Display Monitoring" section, page 27-28.) **Warning: Do not connect battery until all wiring is completed.**

FIGURE 16



## Battery Test

Panel conducts dynamic battery test under load every 60 seconds. If the battery is disconnected, or capacity is low, trouble indicator key **[1]** illuminates. Key **[1]** also comes "on" if battery voltage drops to 10.5 volts while panel is running on battery power (with no AC). At 8.5 volts, the panel shuts down and all outputs close.

## /// **INSTALLER PROGRAMMING** **ESPLOAD**

The 748ES can be remotely programmed with Espload upload/download software, or on site using Espload and a ADP-1 adapter. Advanced Espload software can carry out fast upload or download, and provides many powerful features, including a comprehensive "monitoring" mode to oversee all panel activity, a "scheduler" to initiate preprogrammed tasks at set intervals, and a "batch" mode to carry out preprogrammed tasks following a call from the panel. There is no limit to the number of account files or panel defaults that can be created, and thousands of programming combinations can be assigned to PGM outputs using Espload. Espload can be converted to the language of your choice, and individualized help menus can also be generated. Contact your local Paradox Distributor for your copy of Espload software.

## KEYPAD

To program Esprit panels via the keypad, first complete the programming work sheets and follow the programming procedures outlined in the "**Programming Guide**".

## PROGRAMMABLE FEATURES

### Hexa Programming:

All digits from 0 to F are valid. Programming values are programmed into memory locations from address **000** to **043** and from address **300** to **527**.

- 1) Press **[ENTER]** + installer code.
- 2) **[ENTER]** will flash (programming mode).
- 3) Enter 3 digit memory address.
- 4) Enter 2 digit data.
- 5) Go to step 3 for next address.

To exit programming mode, press **[CLEAR]**.

### Streamlined Section Programming:

To begin programming:

Press **[ENTER]** + installer code + **[7]**. (**[ENTER]** and **[2ND]** keys will flash.)

Enter 2 digit section for programming (00 - 67). (**[ENTER]** key is "steady" and **[2ND]** key is "off".)

Enter 8 digits to program the section. Keypad will beep, to show section has been programmed.

Data is saved and the next section is made available for programming.

To select a specific section, press **[CLEAR]** or **[ENTER]**. (**[ENTER]** and **[2ND]** keys will flash.)

Enter 2 digit section (00 - 67). (**[ENTER]** key is "steady" and **[2ND]** key is "off".)

To exit programming mode, press **[CLEAR]**.

### Installer Code:

(Addresses **000**, **001**, **002**)      **SECTION 00**

(Use only numeric keys from **[1]** to **[10]** to enter installer code. Key **[10]** = 0.)

The default installer code contains 6 digits. Default code is **747474**. (Codes can also be programmed to contain 4 digits, address **088**, **[9]** "on".) Create a new installer code by entering the values of 1st and 2nd digit at address **000**, 3rd and 4th digit at address **001**, and 5th and 6th digit at address **002**.

The installer code has access to all programming addresses, except **128-299**. It does not provide access to arming/disarming or user code programming. It can be used to modify itself.

Related features:      "Installer lock" **058**      "User/access code length" **088**, **[9]**

**Panel Answer Options:**(Address **003**)**SECTION 00**

The first digit entered disables the "Answering Machine Override" (key **[2ND]** or key **[1]**), or determines the period of time between first and second call.

The second digit entered determines the number of rings required before the panel will answer.

If **[2ND][2ND]** is entered, the panel will not answer. (Default value is **[2ND] [8]**.)

**ADDRESS 003 - FIRST DIGIT - ANSWERING MACHINE OVERRIDE**

Value entered disables this feature or determines the period of time between first and second call.

**[2ND]** or **[1]** = Answering machine  
override disabled

**[4]** = 32 seconds

**[7]** = 56 seconds

**[5]** = 40 seconds

**[8]** to **[F]** = 60 seconds

**[2]** = 16 seconds

**[6]** = 48 seconds

**[3]** = 24 seconds

**Panel Identifier:**(Addresses **004-005**)**SECTION 01**

This four digit code identifies the control panel to the PC before uploading can be initiated. Each pair of code digits has its own memory address. There is no default code. Any hexa digits from 00 - FF can be entered. Program first 2 digits in address **004** and second 2 digits in **005**.

*Related features:* "Panel Answer Options" **003** "Call back" **086**, **[4]**

**PC Password:**(Addresses **006-007**)**SECTION 01**

This four digit download password identifies the PC to the panel, prior to beginning the programming download process. Program the first 2 digits in address **006** and the second 2 digits in **007**.

**Telephone and Account Numbers**

Three telephone numbers can be programmed: a PC telephone number and two central station numbers. Each number can contain a maximum of 16 digits. Special instructions can be entered in the telephone numbers using the following keys:

**[10]** = the number "0"

**[BYP]** = switch from pulse to tone while dialing

**[11]** = \*

**[MEM]** = pause 4 seconds

**[12]** = #

**[TRBL]** = end of number

If only one central station telephone number is available, the same telephone number must be programmed for telephone number 1 and 2. A separate "communicator reporting" format can be selected for each central station telephone number at address **038**.

**Computer telephone number:**(Addresses **008-015**)**SECTION 02 - 03**

The PC download telephone number is dialed in three situations. It is dialed when communication with PC is initiated from the keypad. It is the automatic "call back" number, when the "call back" feature is enabled (**086**, **[4]** "on"). If the event buffer is ready to report, and "automatic event buffer transmission" feature is enabled (**088**, **[2ND]** "on"), this number will be dialed in order to download the event list.

*Related features:* "Panel Identifier" **004-005** "PC password" **006-007** "Call back" **086**, **[4]**

**Central station telephone number 1**(Addresses **016-023**)**SECTION 04 - 05****Central station telephone number 2**(Addresses **024-031**)**SECTION 06 - 07**

The panel can communicate with two central station numbers. Each of the numbers can be assigned a separate reporting format.

*Related features:* "Communicator Formats" **038** "Reporting options" **086**, **[11]** and **[12]**

*Espload note:* Upon alarm, upload/download in progress will be interrupted and the panel will call the central.

## System account codes (system "A"/"B") (Addresses 032-035) SECTION 08

All report codes are preceded by a system account code to ensure correct identification of active zone(s) in a partitioned system. **If partitioning is deactivated, the same value should be programmed for both account numbers.** To program account codes for System "A" and "B", press [ENTER] + installer code + [7] + [10] [8]. The first four digits entered after this sequence correspond to the System "A" account code, and the last four digits to the System "B" account code.

## Time Correction (Address 037, second digit) SECTION 09

If you notice a gain/loss in panel time, calculate the average gain or loss per day, and select the "opposite" amount from the following table to automatically correct the time setting every 24 hours.

Ex: Panel loses 4 minutes per month.

This represents an average **loss** of 8 seconds per day.

Select key [2] - **plus 8 seconds** - to correct the time setting.

Enter any value for the first digit i.e. [2ND] at address 037.

### TIME CORRECTION:

(address 037 second digit)

[2ND] - No adjustment	[8] - Minus 4 seconds
[1] - Plus 4 seconds	[9] - Minus 8 seconds
[2] - Plus 8 seconds	[10] - Minus 12 seconds
[3] - Plus 12 seconds	[11] - Minus 16 seconds
[4] - Plus 16 seconds	[12] - Minus 20 seconds
[5] - Plus 20 seconds	[BYP] - Minus 24 seconds
[6] - Plus 24 seconds	[MEM] - Minus 28 seconds
[7] - Plus 28 seconds	[TRBL] - Minus 32 seconds

## Communicator Formats (Address 038) SECTION 09

### Ademco contact ID (all codes reported) (key [10])

All report codes are preprogrammed in this **DTMF** reporting format. There is no need to program values for addresses 300-527 if both central station numbers use this format. Contact ID event codes are listed below:

CONTACT ID EVENT CODES					
CODE	DEFINITION	REPORTING ADDRESS	CODE	DEFINITION	REPORTING ADDRESS
100:	AUXILIARY ALARM	514	373:	FIRE LOOP TRBL	500, 508
110:	FIRE ALARM	402, 426, 515	383:	SENSOR TAMPER	472 to 495, 510
120:	PANIC ALARM	513	400:	OPEN/CLOSE	519
121:	DURESS	520	401:	O/C BY USER	301 to 349, 351 to 399
130:	BURGLARY	400 to 447	404:	LATE TO O/C	516, 517
300:	SYSTEM TROUBLE	496, 504	407:	REMOTE ARM DWNLD	300, 350
301:	AC LOSS	499, 507	410:	REMOTE ACCESS	524
302:	LOW SYSTEM BATT	498, 506	570:	BYPASS	518
305:	SYSTEM TIME RESET	501	573:	BURGLARY BYPASS	448 to 471
306:	PROGRAM CHANGED	525	602:	PERIODIC TEST	512
321:	BELL 1 TROUBLE	497, 505	625:	TIME DATE RESET	509
351:	TELCO 1 FAULT	511			

### Ademco contact ID (programmable codes reported) (key [9])

All addresses from 300 to 527 programmed with values other than [2ND] [2ND] will report the contact ID codes corresponding to the values programmed (according to the "Programmable Contact ID Event Codes" table in the Programming Guide).

### Ademco express (key [8])

This high speed reporting format communicates 2 digit events programmed in addresses 300 to 527 at a speed of 2 seconds per event.

### DTMF - no handshake ([TRBL] key)

All addresses from 300 to 527 programmed with values other than [2ND] [2ND] will report the contact ID codes corresponding to the values programmed (according to the "Programmable Contact ID Event Codes" table in the Programming Guide). This format can be utilized in reporting situations where a central station receiver is not connected to the telephone number. It's useful for personal reporting where a "handshake" is not required. (In "double reporting" mode, first central station number can be connected to a receiver, while second can be used for personal reporting using "no handshake" format. The panel will make two attempts to call the "no handshake" number.)

## Standard pulse formats

Ademco slow, Silent Knight, SESCOA, and Radionics are programmable with keys [2ND] to [7].

### COMMUNICATOR FORMATS

#### KEY

[2ND] = ADEMCO slow (1400Hz, 1900Hz, 10bps)	[6] = RADIONICS with PARITY (1400Hz, 40bps)
[1] = (1400Hz, 1800Hz, 10bps)	[7] = RADIONICS with PARITY (2300Hz, 40bps)
[2] = SILENT KNIGHT fast (1400Hz, 1900Hz, 20bps)	[8] = ADEMCO express
[3] = SESCOA (2300Hz, 1800Hz, 20bps)	[9] = ADEMCO contact ID (programmable codes)
[4] = RADIONICS (40bps with 1400Hz handshake)	[10] = ADEMCO contact ID (all codes)
[5] = RADIONICS (40bps with 2300Hz handshake)	[TRBL] = DTMF - no handshake (personal dialing)

## Programmable Output (PGM) Types (Address 039) SECTION 09

Regular N.O. Solid state switch conducts to negative (50mA\*) upon an event or events, and returns to its original state (N.O) once the conditions that triggered it have terminated.

Regular N.C. Solid state switch opens circuits from ground upon an event or events and returns to its original state (N.C.) once the conditions that triggered it have terminated.

Timed N.O. Solid state switch conducts to negative (50mA\*) upon an event or events and remains activated for the amount of time programmed at address 056.

Timed N.C. Solid state switch opens circuits from ground upon an event(s) and remains activated for the amount of time programmed at address 056.

"OR" logic Causes the programmable output command to occur when one or more selected events from a specified group of events take place (example: key [1] OR [2] is pressed on keypad.)

"AND" logic Causes the programmable output command to occur when all selected events from a specified group of events take place (example: key [1] AND key [2] are pressed.)

"EQUAL" logic Causes the programmable output command to occur when all events from a specified group of events take place (example: key [1] and [2] are pressed but [3], [4], [5], [6], [2ND] and [TRBL] are not pressed.)

\*UL tested for 30mA only.

### PGM TYPE

Address 039 (section 09)

#### KEY

[2ND] : OR  
[1] : AND  
[2] : EQUAL

Reg N.O.

#### KEY

[8] : OR  
[9] : AND  
[10] : EQUAL

Reg N.C.

[4] : OR  
[5] : AND  
[6] : EQUAL

Timed N.O.

[12] : OR  
[BYP] : AND  
[MEM] : EQUAL

Timed N.C.

(For timed PGM see also address 056)



## Typical PGM (Programmable Output) Programming

FUNCTION	DESCRIPTION	PGM 1			PGM 2		
		Add. 039 1 <sup>ST</sup> digit	Add. 040	Add. 042	Add. 039 2 <sup>ND</sup> digit	Add. 041	Add. 043
*Ground start Pulse (Timed N.O.)	Provides <b>3 sec.</b> pulse before communication attempt.	[5]	[5]/[2]	[2ND]/[8]	[5]	[5]/[2]	[2ND]/[8]
Push key [1] and [2] (Regular N.O.)	Provides output when keys [1] and [2] are pressed simultaneously.	[1]	[5]/[8]	[2ND]/[6]	[1]	[5]/[8]	[2ND]/[6]
System armed (Regular N.C.)	Output removed when system armed.	[9]	[2]/[11]	[2ND]/[8]	[9]	[2]/[11]	[2ND]/[8]
Strobe output (Regular N.O.)	Provides latching output on alarm, until disarmed.	[2ND]	[2]/[12]	[2ND]/[2]	[2ND]	[2]/[12]	[2ND]/[2]
Fail to communicate (Timed N.O.)	Provides output upon fail to communicate for <b>2 minutes</b> .	[5]	[2]/[6]	[2ND]/[4]	[5]	[2]/[6]	[2ND]/[4]
2nd telephone line relay (Regular N.O.)	Provides output after one failed communication attempt.	[2ND]	[7]/[10]	[2ND]/[MEM]	[2ND]	[7]/[10]	[2ND]/[MEM]
Kiss off (Timed N.O.)	Provides <b>3 sec.</b> output after signal received at monitoring station.	[5]	[7]/[BYP]	[2ND]/[8]	[5]	[7]/[BYP]	[2ND]/[8]
*Not permitted on UL listed systems.							

Note: For other PGM operations, use **Esplod** software by programming the desired PGM function and pressing **F8** to see the keypad programming codes and address. If **other** programming options are needed, fax your requests to Paradox Technical Support at 514-491-2313.

## Special Timing Functions

### 3 Digit Decimal Value Programming

Decimal programming is used to program addresses **044** to **061**. Values entered must contain 3 digits.

#### Decimal value programming:

- 1) Press **[ENTER]** + installer code. (**[ENTER]** key will flash.)
- 2) Enter 3 digit address (**044** to **061**).
- 3) Enter 3 digit DECIMAL value.
- 4) To erase, press **[CLEAR]**. To save, press **[ENTER]**.
- 5) Repeat from step 2 onward for next address. To exit programming mode press **[CLEAR]**.

#### "No movement"

If a time is programmed at address **055**, and a report code is entered at address **517 (SECTION 65)**, the panel will send a report to the central, when there is no movement in the protected area for a designated time period.

#### "Late to close"

If the system is not armed by a specified time (addresses **044**, **045**) the code programmed at address **516 (SECTION 65)** will be transmitted.

#### Auto arming

The panel can be programmed to automatically arm itself every day in two ways: at the specified time programmed at addresses **044**, **045** and/or once the "no movement" delay has elapsed (address **055**). To program "auto arming", go to address **086** and enable key **[5]** (auto arm on time), and/or key **[6]** (auto arm on "no movement"). All zones must be closed in order for the system to auto arm. If panel fails to auto arm, only the "late to close" (address **516 (SECTION 65)**) or the "no movement" (address **517 (SECTION 65)**) report will be transmitted. The "auto arm" report is programmed at address **300 (SECTION 11)**.

## Operational note regarding special timing functions

The time programmed at addresses **044** and **045** can be used to:

- Transmit "Late to Close" code, address **516** (**SECTION 65**), if the system is not armed by a specified time.
- Auto-arm the system and if programmed, transmit the arming code at address **300** (**SECTION 11**) after transmitting the "Late to Close" code (as above).

The time programmed at addresses **047** and **048** can be used to:

- Specify the time of day for the Test Report (code programmed at address **512** (**SECTION 64**)).

The amount of time programmed at address **055** (Max = 63.75 hours) can be used to:

- Transmit the "No Movement" code, address **517** (**SECTION 65**), if there is no movement in the protected area while the system is disarmed.
- Auto-arm the system and if programmed, transmit the arming code at address **300** (**SECTION 11**) after transmitting the No Movement code (as above).

The "Late to Close" code programmed at address **516** (**SECTION 65**) will be transmitted:

- At the time programmed at addresses **044** and **045** if the system is not armed.

The "No Movement" code programmed at address **517** (**SECTION 65**) will be transmitted:

- After the time programmed at address **055** expires.

The amount of time programmed at address **056** (Max = 127 minutes) can be used to:

- Designate the length of time a programmable output (PGM) will remain active following a specified event.

### Auto test report options

Reports the code programmed at address **512** after the number of days programmed at address **046**, at the time programmed at addresses **047**, **048**. (To disable, program **000** at address **046**.)

### Auto arm options

- 1) Send a "late to close" code programmed at address **516**.
- 2) Auto arm the system (on time) if enabled at address **086**, key **[5]**.
- 3) Auto arm the system (no movement) if enabled at address **086**, key **[6]**.

### Exit Delay

(Address **049**)

Range 001 to 255 seconds (*factory default 060 seconds*). Applies to all zones upon arming.

### Entry Delay 1

(Address **050**)

Range 001 to 255 seconds (*factory default 045 seconds*). Applies upon entry to all zones **not** selected at addresses **100** to **114**.

### Entry Delay 2

(Address **051**)

Range 001 to 255 seconds (*factory default 045 seconds*). Applies to all zones selected at addresses **112**, **114**, upon entry.

### Bell Cut-off Time

(Address **052**)

Range 001 to 255 minutes (*factory default 005 minutes*).

### Zone Speed

(Address **053**)

Range 001 to 255 X 15mSec., (*factory default 600 mSec*). Maximum time 3.8 seconds.

### Power Failure Report Delay

(Address **054**)

Range 001 to 255 minutes, (*factory default 030 minutes*), (*000 = disabled*). Delay code reported at address **499**.

### "No Movement" report time

(Address **055**)

Range 001 to 255 X 15 minutes. (*Factory default 8 hours (000 = disabled)*). System will automatically arm after programmed number of minutes of inactivity if enabled at address **086**, key **[6]**, or will transmit code programmed at address **517**. (Maximum time 63.75 hours)

**PGM Timer Setting**(Address **056**)

Range 001-127 sec. or 1 minute (enter 129) 127 minutes (enter 255). (Add required number of minutes to 128)

i.e. For 5 minutes =  $128 + 5 = 133$

For 127 minutes =  $128 + 127 = 255$

Applies to PGM 1 and 2 if selected at address **039**. (Maximum time, 127 minutes)

**Intelli zone Delay**(Address **057**)

This time limit, set between 10 and 255 seconds, is the period in which two intellizone detections must take place, or in which an intellizone must remain open, in order for an alarm to be communicated.

Note: do not use the Intellizone feature and an entry delay on the same zone, otherwise an alarm may occur as a user tries to disarm the system.

**Installer Lock**(Address **058**)

If **147** is programmed at address **058**, all programming will be locked and **will not** be affected when the system is reset.

**Programmable Delay Before Alarm Transmission** (Address **059**)

This time limit, set between 5 and 63 seconds, is the period of time before reporting begins the first time an alarm is generated. During the waiting period, system disarm will cancel all pending reports.

Note: For UL listed systems the time limit must be set to a maximum of 30 seconds.

**Recent Closing Delay**(Address **060**)

This time limit, set between 1 and 255 seconds, begins as soon as the system is armed, and continues until expiration of the period programmed. Every time an alarm occurs during this period, a "recent close" code (address **519**) will be sent to the central.

**System Options**(Default = "off" for addresses **062-126**)**Feature select programming**

"ON"/"OFF" status of the key lights determines feature selection.

In programming mode, enter 3 digit memory address (**062** to **126**).

To save entries, press **[ENTER]**. To exit programming mode press **[CLEAR]**.

**Code priority**(Addresses **062** to **078**)**If partitioning is disabled**(Address **086**, key **[8]** "off")

Addresses **062-066**: Lighted keys indicate which user codes can activate "stay" arming.

Addresses **068-072**: Lighted keys indicate which user codes can activate force "away" arming.

Addresses **074-078**: Lighted keys indicate which user codes can "bypass" zones.

**If partitioning is enabled**(Address **086**, key **[8]** "on")

Addresses **062-066**: Lighted keys indicate which user codes are assigned to System "A".

Addresses **068-072**: Lighted keys indicate which user codes are assigned to System "B".

Addresses **074-078**: Lighted keys indicate which user codes can "bypass" zones.

(See also page 25.)

**TLM options**(Address **086**, key **[2ND]** and key **[1]**)

The system verifies the existence of a telephone line every 4 seconds. After successful tests, the dialer LED (green light) flashes briefly on control panel. If the test fails, LED illuminates 4 seconds "on", then 4 seconds "off". TLM trouble will be activated when less than 3 volts are detected in 4 consecutive tests.

**Note:** When the dialer detects a telephone ring, the TLM test stops for 1 minute.

There are three options for TLM use.

- (1) Line test failure can generate a trouble indication.
- (2) Line test failure can generate a trouble indication and an alarm if the system is armed.
- (3) Line test failure will cause a silent zone or a silent panic alarm to switch to audible mode.

**TLM TABLE** (TLM = Telephone Line Monitor)

KEY	
<b>[2ND]</b>	<b>[1]</b>
OFF	OFF — TLM is disabled (default)
OFF	ON — TLM generate a trouble only
ON	OFF — generates an alarm if armed
ON	ON — silent alarm becomes audible

↳ (address **086**, key **[9]** has to be **OFF**)

## Arming using PS1 or keyswitch

(Address **086**, key **[2]** and key **[3]**)

The PS1 bedside remote arming module or keyswitch can be used to stay arm, full arm, or disarm the system. The PS1 keyswitch is enabled at address **086**, key **[3]**.

Key **[2]** "off": PS1 or keyswitch "regular" arms system.

Key **[2]** "on": PS1 or keyswitch "stay" arms system.\*

\*Note: If partitioning is enabled (address **086**, key **[8]** "on"), PS1 arms system "A" only. Use of PS1 is not recommended for partitioned systems.

## Call back

(Address **086**, key **[4]**)

For extra security, the panel can be programmed to call the PC back when communication is attempted by the PC. The panel will first answer the call, then Espload and the panel will verify identification codes. The panel will then hang up and call the PC back and establish communication. Espload automatically goes into the "wait for call mode", ready to answer when the panel calls back. The identification codes are verified again before allowing access to the panel.

*Related features:* "Computer telephone number" **008-015**.

## Auto arm

On Time:

(Address **086**, key **[5]**)

The panel may be programmed to arm at the same time every day. Program both the hour and minute (addresses **044**, **045**) for arming. A late closing code may be programmed (address **516**).

*Related features:* "Auto arm" **090**, **[2]** "Auto/Espload Arm" **300** "Auto arming" p.15.

No Movement:

(Address **086**, key **[6]**)

If zone activity is not detected for a programmed period (address **055**) while disarmed, the panel can auto arm and/or send a "no movement" report (address **517**). Refer also to "No movement" p. 15.

## Touch tone options

(Address **086**, key **[7]**)

Tone (key **[7]** = "on") or pulse dialing can be programmed. If "pulse" is chosen for a central station phone number, "tone" dialing can be programmed for the other number. **[BYP]** ("switch from pulse to tone") should be entered in the second phone number during programming.

## Partitioning

(Address **086**, key **[8]**)

Partitioning is activated, (key **[8]** "on"). The panel's fully programmable zones (plus 2 remote keypad zones) can be divided into two systems. (See "System Partitioning", page 25.)

## Silent alarm

(Address **086**, key **[9]**)

Key **[9]** "off":

Silent zones/panics generate a silent alarm. Zones defined as "silent" at addresses **096-098** and keypad panic zones will not cause an audible alarm, however, the keypad "armed" light will flash and the alarm condition will remain until a valid user code is entered.

Key **[9]** "on":

Silent zones/panics generate only a report (The red keypad LED does not flash, and there is no need to "reset" the silent alarm.)

Silent delay zones generate an entry delay beep, and a report at the end of the entry delay.

Zone restore is always reported upon zone closure.

Memory display, auto zone shutdown are always active for silent zones when enabled at address **086**, key **[TRBL]**.

Silent alarms can be monitored by a PGM output. (Silent flag is cleared on report or disarm.)

On split reporting, silent zones/panic are reported to Telephone #1.

## Dialing pulse rates

(Address **086**, key **[10]**)

This selection reflects the ratio between "pulse" time and "quiet" time. Select Pulse Europe for a 1:2 ratio (Key **[10]** = "off"), Pulse USA for 1:1.5. (Key **[10]** = "on")

## Reporting options

### Regular reporting

(Address **086**, key **[11]** "off" and key **[12]** "on")

To activate central station reporting, the feature must be enabled and all required reporting codes, except when using "Ademco contact ID (all codes reported)", must be assigned a value other than **[2ND][2ND]**.

To establish communication, the communicator takes the telephone line and waits for a dial tone. If a dial tone is identified, the communicator will dial the **first** central station telephone number. If a connection is made, system report will take place and the communicator will hang up upon completion. If for any reason, communication is interrupted, the communicator will dial the **2nd** central telephone number and report only the events that were not reported during the interrupted attempt.

During a communication attempt, the communicator waits for a dial tone for up to 8 seconds. Even if a dial tone is not found, **the communicator will dial the central station.**\*\*\* After 60 seconds, if communication has not been established, the dialer will hang up, wait 5 seconds and try the second number. This sequence will be repeated 8 times, switching back and forth between the 1<sup>st</sup> and 2<sup>nd</sup> number. (Regular reporting dialing procedure: 1,2,1,2,1,2,1,2, "communicator report failure".)

\*\*\*This feature is useful for PBX systems, which do not provide a dial tone. You can program the dialing sequence required to get a line on a PBX system, and this sequence will be added before the central station number. If there is a time delay between dialing and getting a line, this can be programmed into the dialing sequence using the **[MEM]** ("pause") key.

After 8 unsuccessful attempts, the redial sequence ends and "communicator report failure" will appear in the keypad's trouble display (key **[7]** "on"). When the **next** reportable event occurs, (even if it is not programmed to report to the central), the communicator will try again to establish communication. If successful, all events stored in the event buffer that have not yet been reported will be communicated to the central.

### **Split reporting**

(Address **086**, key **[11]** "on", key **[12]** "off")

All "system" reports (i.e. trouble reports, arm/disarm reports, etc.) are sent to Telephone #2, until an alarm is generated. Following alarm generation, all activity, including alarm and restoration reports, is sent to Telephone #1 until the system is disarmed. When there is an alarm, any **ongoing** communication (upload/download or reporting to Telephone #2) will immediately be stopped and the panel will dial Telephone #1.

Alarm reports dialing procedure: (1,1,1,1,1,1,1,1, "communicator report failure")

"System" reports dialing procedure: (2,2,2,2,2,2,2,2, "communicator report failure")

### **Double reporting**

(Address **086**, key **[11]** "on", key **[12]** "on")

The panel will transmit all reports to both programmed telephone numbers. If, after 8 attempts using either number, communication is not established, "communicator report failure" will be displayed by key **[7]**.

Double reporting dialing procedure: (1,1,1,1,1,1,1,1, "communicator report failure")

(2,2,2,2,2,2,2,2, "communicator report failure")

Note: To stop communication attempts until the next reportable event, press **[ENTER]** + installer code + **[STAY]**.

### **Bell squawk**

(Address **086**, key **[MEM]**)

Bell/siren will emit a 0.5 second "squawk" **once** upon arming, and **twice** upon disarming.

(Key **[MEM]** "on" = enabled)

### **Auto zone shutdown**

(Address **086**, key **[TRBL]** "on")

Key **[TRBL]** "on" = Zones that initiate 5 consecutive alarms during the same armed period will be automatically bypassed. (Zones must be bypass-enabled at addresses **124-126**.) After a zone has been bypassed, the panel can send a "zone shutdown" report to the central (if programmed to do so at addresses **448-471**).

Note: Once auto zone shutdown has been enabled, it will either be activated after 4 "zone closure" restoration reports or 4 "bell cut-off" restoration reports, depending on which type of alarm restoration code has been activated at address **088**, key **[BYP]**.

### **Automatic event buffer transmission**

(Address **088**, key **[2ND]**)

Key **[2ND]** "on" = system will dial the computer telephone number programmed in Section **02** and **03** (addresses **008-015**) to upload the contents of the event buffer to the PC. (Espload must be in "wait for call" mode.) The system will make two attempts to call the PC when the event buffer reaches 50% capacity. If communication is established, the system will then proceed to report the contents of the event buffer to the PC. Should transmission be interrupted before the complete contents of the buffer can be

transmitted, or if after two attempts, communication is not established, the system will wait until the event buffer is full, before attempt to communicate with the central again.

If communication is established, the system will then proceed to report the contents of the event buffer to the PC. If after two attempts, communication is not established, each subsequent new event will erase the oldest event in the buffer, until the event buffer once again reaches 50% capacity.

### **Enable keypad panic signals** (Address **088**)

Key **[1]** "on" = Panic 1 (keys **[1]** and **[3]**, PS1) enabled

Key **[2]** "on" = Panic 2 (keys **[4]** and **[6]**) enabled

Key **[3]** "on" = Panic 3 (keys **[7]** and **[9]**) enabled

### **Keypad panic options** (Address **088**)

Key **[4]** "off" = Panic 1 silent

Key **[5]** "off" = Panic 2 silent

Key **[6]** "off" = Panic 3 silent

Key **[4]** "on" = Panic 1 audible

Key **[5]** "on" = Panic 2 audible

Key **[6]** "on" = Panic 3 fire

#### *Silent operation*

When panic keys **[1]** and **[3]**, **OR** **[4]** and **[6]**, **OR** **[7]** and **[9]** are pushed simultaneously for 2 seconds or PS1 is used, a single confirmation beep is sounded, codes programmed at addresses **513**, **514**, and **515** are transmitted and the alarm latches, flashing the keypad "**armed**" light until reset by a user code.

#### *Audible operation*

When panic keys are pushed in addition to alarm codes being transmitted, the alarm output (bell/siren) will activate until reset by a user code or until the bell cut-off time (address **052**) expires.

#### *Fire operation*

Same as audible operation except that bell/siren output will be pulsed (intermittent "on"/"off").

### **"One key" arming enable** (Address **088**)

Key **[7]** "on" = Pushing key **[10]** for 2 seconds "full" arms system.

Key **[8]** "on" = Pushing key **[11]** for 2 seconds "stay" or "system A" arms system.

### **User/access code length** (Address **088**)

Key **[9]** "off" = 6 digit user/access codes and installer code.

Key **[9]** "on" = 4 digit user/access codes and installer code.

### **Tamper/wire fault definitions** (Address **088**)

Note: If key **[10]** and key **[11]** are both "off", this means that tamper and wire faults will not be recognized. See "Zone Input Terminals" page 8-9, "Tamper/Wire Fault Definition and Options", page 9, and "Tamper/wire Fault Definition table" in the "Programming Guide".

### **Beep on exit delay** (Address **088**)

Key **[12]** "on" = The keypad will sound on exit delay (except when in "stay" arming). Frequency of intermittent beeps increases during the last 10 seconds of the exit delay period.

### **Zone restore transmission** (Address **088**)

Key **[BYP]** "off" = If zone is closed, restoration code will be transmitted after "bell cut-off".

Key **[BYP]** "on" = Restoration code transmitted as soon as zone is closed.

**Silent zones are always restored as soon as they are closed.**

### **Zones with EOL resistors** (Address **088**, key **[MEM]**)

See "Zone Input Terminals" pages 8-9.

### **Always report disarm** (Address **088**)

Key **[TRBL]** "off" = always reports disarm codes.

Key **[TRBL]** "on" = reports disarm code only after alarm.

### **Exclude power failure from trouble display** (Address **090**, key **[2ND]**)

Key ="on": Power failure will not make the **[TRBL]** key flash.

This trouble condition may still be viewed after pressing **[TRBL]**.

## Arming Options

### Auto arm

(Address **090**, Key **[2]**)

Key ="off": When system auto arms (on time or "no movement"), "regular" arming will take place (if all zones are closed).

Key ="on": When system auto arms (on time or "no movement"), "STAY" arming will take place (if all zones are closed). If zone partitioning is programmed (address **086**, key **[8]**), System "A" will arm. (See also "Auto arming" page 15.)

### No tamper bypass

(Address **090**, key **[6]**)

Key ="off": Device tamper will not follow zone bypass.

Key ="on": Device tamper will follow zone bypass.

### Audible trouble warning

(Address **090**, Key **[9]**)

Key ="on": Trouble conditions cause intermittent **audible** trouble warning on keypad. To silence, push **[TRBL]**.

Note: Must be enabled for UL listed systems.

### Duress alert

(Address **090**, Key **[10]**)

Key ="on": A duress code can be sent to the central whenever a person enters it on a keypad.

This sends a silent alert if a user is forced to disarm the system. Only user 48 can use this feature.

## Keypad zone supervision

### Keypad 1 zone supervision

(Kpd 1)

(Address **090**, key **[11]**)

"ON" = enabled

"OFF" = disabled

### Keypad 2 zone supervision

(Kpd 2)

(Address **090**, key **[12]**)

"ON" = enabled

"OFF" = disabled

Keypad zone supervision allows the system to verify the presence of a keypad and its keypad zone(s). When enabled, only **two** keypad zones (one configured as **keypad 1**, and one configured as **keypad 2**) can be used at one time. Any other keypad zone terminals **must be** shorted.

If using a 616, 626, or 633 LED keypad with software version 3.9 or earlier, **OR** a PS1 version 1.1, **OR** a 639/640 keypad with its keypad zone supervision feature disabled (address **32**, key **[3]** "off"), or if the keypad zone is not used:

- **KEYPAD ZONE SUPERVISION FEATURE MUST BE "OFF".**

If using a 616, 626, or 633 LED keypad with software version 4.0 onward, **OR** a PS1 version 2.0 onward, **OR** a 639/640 LCD keypad with its keypad zone supervision enabled (address **32**, key **[3]** "on"):

- **KEYPAD ZONE SUPERVISION FEATURE MUST BE "ON".**

*Related features: Keypad connections. p.8*

## Zone Definition

(Addresses **092-126**)

Zone definition is assigned during "feature selection" programming. Turning zone key "on" or "off" at addresses **092-126** assigns a particular definition to the zone. (See "Programming Guide").

### Intelli zone definition

(Addresses **092, 094**)

Key "on": When an alarm condition occurs on a zone defined as intellizone, a timer (set between 10-255 seconds, at address **057**) is triggered. An alarm will only be generated if:

- 1) An alarm condition occurs on a second zone, within the specified time period.
- 2) The alarm condition, on the first zone, restores and reoccurs, within the specified time period.
- 3) The alarm condition, on the first zone, stays on for the complete duration of the specified time period.

Key "off": An alarm is generated as soon as the zone is opened. This feature should be disabled on UL listed systems.

Note: do not use the Intellizone feature and an entry delay on the same zone, otherwise an alarm may occur as a user tries to disarm the system.

### Silent/audible

(Addresses **096, 098**)

Silent zones (keys "on") report alarms without triggering bells/sirens. (Reminder: fire zone is never silent.)

Audible zones (keys "off") will trigger a bell or siren upon alarm generation.

**24 hour - fire/regular**(Addresses **100, 102**)

"24 hour" zones (keys "on") generate alarms whenever the zone is detected, even if the system is not armed. Zone 3 becomes a fire zone when defined "24 hour". The fire zone should always be connected with a 1K $\Omega$  EOL resistor. If there is a line short in the fire zone, a fire alarm will be generated. If the line is "open", a fire trouble report (if assigned at address **500**) will be sent to the central, and trouble indicator **[11]** and fire zone key **[3]** will flash on the keypad. Alarms in a fire zone generate an intermittent output signal, regardless of system arming status.

**Instant**(Addresses **104, 106**)

"Instant" zones (key "on") will immediately generate an alarm when detected while the system is armed. There is no entry delay.

**Follow**(Addresses **108, 110**)

"Follow" zones (key "on") are "instant" zones that switch to "delay" definition during entry delay.

**Delay 2**(Addresses **112, 114**)

One of two different zone delays (delay 1 & delay 2) can be assigned to each zone. Zones activated at this address are assigned "Delay 2" definition. The length of zone entry delays is programmed at addresses **050-051**. Any zones that are not activated at addresses **100-114** are assigned "Delay 1" zone definition.

**Note: When more than one zone definition is selected, zone definition priority is assigned in this order: (1) 24 hr., (2) instant, (3) follow, (4) delay 2 and (5) delay 1.**

**System assignment**(Addresses **116, 122**)

Refer to "System Partitioning", page 25)

*Related programming:*

*"Partitioning 086, [8]."*

**Bypass-enabled**(Addresses **124, 126**)

"Bypass-enabled" zones (keys "on") are zones that can be bypassed during "manual bypass" arming and auto zone shutdown. The fire zone cannot be bypassed.

Note: If a zone should not be bypassed, turn "off" its corresponding zone key.

**Reporting Codes:**(Addresses **300-527**) **SECTION 11- 67**

The panel can report information regarding system and "protected area" status to the central monitoring station, when reporting is activated at address **086**. All data to be communicated should be assigned a 2-digit hexa reporting code, consisting of numbers from 0-F. Examples of two digit hexa code combinations are **[6] [BYP]** and **[9] [TRBL]**. Written in hexa notation, these codes are **[6] [D]** and **[9] [F]**.

Using the keypad for hexa digit entry, keys **[10]**, **[11]**, **[12]**, **[BYP]**, **[MEM]** and **[TRBL]** correspond to hexa digits A, B, C, D, E and F, respectively.

The **[2ND]** key's value is "skip" (empty). It is ignored by the panel, so to avoid reporting a specific condition to the central, enter **[2ND][2ND]** after the report address for that condition. Also, when programming 3 digit account codes and 1 digit alarm codes (3-1 reporting), use **[2ND]** in lieu of the first digit.

All report codes are assigned to a system account, whether or not partitioning is activated. Arm/disarm reports are assigned to System "A" when partitioning is "off", or to the system account to which they belong, based on code priority assignment, when partitioning is activated.

Trouble and special report codes are always assigned to System "A".

**Arming codes/disarming codes:**(Addresses **300-399**) **SECTION 11- 35**

System access codes can be programmed to generate hexa report codes that communicate the identity of the **user** arming/disarming the control panel to the central monitoring station. Each user code can be assigned an arm/disarm report code. *Auto/Esplod Arm* will be reported to the central when Esplod is used to arm the control panel or when the system arms itself automatically (on "no movement" or at a specified time). *Esplod disarm* will be reported to the central when Esplod is used to disarm the control panel. *Arm/disarm with master code* will be reported to the central when the master code or keyswitch is used to arm/disarm control panel.



**Zone alarm codes:** (Addresses **400-423**) **SECTION 36- 41**

Alarm report codes programmed will be sent to the monitoring station, identifying the zones that are generating alarms.

**Zone restore codes:** (Addresses **424-447**) **SECTION 42- 47**

Zone restoration codes programmed will be sent to the monitoring station, identifying zones returning to normal status after alarms.

**Shutdown codes:** (Addresses **448-471**) **SECTION 48-53**

These codes are sent to the monitoring station to identify zones bypassed during "auto zone shutdown" (address **086**, [TRBL].)

**Tamper trouble codes:** (Addresses **472-495**) **SECTION 54-59**

These codes identify zone locations of tamper "troubles" to the central.

**Trouble codes:** (Addresses **496-503**) **SECTION 60- 61**

6 trouble status codes can be reported to the central, if programmed: max. auxiliary current, bell disconnect/max. bell current, battery disconnected/low voltage, power failure, fire loop trouble, and timer loss. (See "Trouble Display/Monitoring", page 27-28, for a list of trouble conditions displayed on the keypad.)

**Trouble restore codes:** (Addresses **504-511**) **SECTION 62- 63**

If trouble conditions occur and are reported, once normal status is re-established, a "restoration" code can be transmitted to the central to indicate that the "trouble" situation has been rectified.

Note: All Tamper/Wire Faults must be restored before a "Tamper/Wire Fault" restoration code is transmitted.

**Special codes:** (Addresses **512-527**) **SECTION 64- 67**

These codes are assigned to report 11 special status conditions.

<i>Test report</i>	Test report will be reported to the central automatically at the day and time set for the "auto test report" (addresses <b>046</b> , <b>047</b> , <b>048</b> ) or manually. To send a manual test report, press [ENTER], followed by installer, master or user code 1, and [BYP] are pressed.
<i>Panic 1</i>	Panic alarm will be reported to the central if PS1 is used or if keys [1] and [3] are pressed for 2 seconds.
<i>Panic 2</i>	Panic alarm will be reported to the central if keys [4] and [6] are pressed for 2 seconds.
<i>Panic 3</i>	Panic alarm will be reported to the central if keys [7] and [9] are pressed for 2 seconds.
<i>Late to close</i>	Will be reported to the central when the system has been armed (or not) by the required time.
<i>No movement</i>	Will be reported to the central when there is no movement in the protected area for a designated time period.
<i>Partial arming</i>	Will be reported to the central if the control panel is armed while any zones are bypassed or when the system is force armed and stay armed.
<i>Recent close</i>	This code is sent to the monitoring station to notify that an alarm occurred shortly after the system was armed (during the "recent closing" delay). This feature is designed to help prevent unneeded response from the central.
<i>Duress</i>	A duress code is sent to the central whenever a person enters it on a keypad. This feature is primarily intended to send a silent alert if a user is forced to disarm the system under threat. Only user 48 can use this feature.
<i>Log-in (Espload)</i>	Will be reported to the central once the communication between the panel and the PC is over.
<i>Program change</i>	Will be reported to the central once programming mode is entered using the installer code.

## /// **USER/KEYPAD FUNCTIONS**

The **Esprit's** innovative keypads take a new approach to security features and functions. Each numeral from 1 to 12 on the keypad represents an actual zone. When the **[2ND]** key flashes, the same numerals represent a second set of 12 zones, zones 13 to 24. When the zone light is "off", the status in the protected zone is normal. If the zone light is "on", this means the zone is open.

"CONF" confirmation beep: an intermittent series of beeps indicating a successful keypad entry.

"END/REJ" end/rejection beep: 1 long tone indicates that the operation was incorrectly entered on the keypad.

## **SYSTEM ARMING/DISARMING OPTIONS**

### **Regular System Arming (default code 474747)**

*(Without partitioning - for information on partitioned system arming, see page 25-26)*

The green "**ready**" light must be illuminated. This "**ready**" indicator will only illuminate if all zones are closed. All door/window contacts must be closed, and any movement in motion detector-protected areas must be halted. When the "**ready**" light illuminates, a valid access code should be entered.

Upon entry of this code, the red "**armed**" light will illuminate, followed by the keypad "**CONF**" beep. (If the access code is entered incorrectly, the "**END/REJ**" beep will sound. If an incorrect entry is made at any time, press **[CLEAR]** and re-enter the data.) The green "**ready**" light will flash for the period of the exit delay, and the **[STAY]** and **[AWAY]** keys will flash.

Note: Keypad will beep on exit if programmed at address **088**, key **[12]**.

### **Force (Away) Arming**

**[AWAY]** + access code

To arm the system rapidly without waiting for the "**ready**" light, use the "away" force arming feature. The **[AWAY]** key should be pressed, followed by a valid access code (addresses **068**, **070**, **072**). Once the exit delay expires, any open zones will not be considered "activated" by the panel. Open zones will not be protected, and will not generate an alarm or prevent arming. These "away" zones will become active (and therefore, protected) as soon as they are closed. Armed status is indicated by illumination of the **[AWAY]** key. A "partial arm" code will be sent if programmed.

Please note: This feature is not recommended for regular use because force arming with open zones can reduce the efficiency of system protection.

### **Stay Arming**

**[STAY]** + access code

When "stay arming" is activated, the security installation is "partially" armed. This means that only selected **STAY** zones are armed (addresses **116**, **118**), so that users can remain in the protected area. This convenient feature (programmed at addresses **062**, **064**, **066**) offers individuals arming the system the choice to leave the premises during an exit delay (without altering the "stay arm" status), or remain on the premises. A system user returning to a protected area that is "stay" armed can re-enter and disarm, as long as a valid access code is keyed in during the entry delay. The **[STAY]** key flashes during "stay" arming.

### **Double "Stay" Arming**

During the "stay" arming exit delay, pressing **[STAY]** (key **[11]**) again will switch all "stay" zones to instant zones (no entry delays). Full system arming cancels "double stay" arming.

### **Fast "Regular" Arming**

Key **[10]**

Fast arming is enabled at address **088** (key **[7]** "on"). If activated, when the ready light is on, pressing key **[10]** for 2 seconds automatically arms the system. There's no need to enter an access code. This feature can be used to permit selected individuals (i.e. maintenance workers, repair personnel) to full arm the system when leaving the protected area. (When partitioning is enabled, key **[10]** arms system "A" and "B".)

## Fast "Stay" Arming

key [11]

Fast "stay" arming is enabled at address **088** (key [8] "on"). When activated, no "ready" light is required, however "stay" zones must be closed to arm the system. Pressing [STAY] (key [11]) for 2 seconds automatically "stay" arms the system. (See "stay" arming features.)

## Fast Exit

Exit while the system is armed in "stay" mode:

### A: Fast exit and Stay key [11]

To exit the premises and remain "stay armed": press key [11/STAY] for two seconds. The system switches to "exit delay" mode ("ready" LED flashes). At the end of the "exit delay" period, the system will return to "stay" arming mode.

### B: Fast exit and Regular Arm key [10]

To exit the premises and "regular" arm: press key [10] for two seconds. The system switches to "regular" arming (key [11] and [12] flash) with "exit delay" ("ready" LED flashes). At the end of the "exit delay" period, the system is "regular" armed.

## System Disarming

The protected area should be entered through a designated entry/exit door. The keypad sounder will beep to remind user to disarm the system. A valid access code should be entered on the keypad, before the allotted entry time expires. If the access code is entered incorrectly, press [CLEAR] and re-enter it. The "armed" light will extinguish and the sounder will change to the "CONF" beep (series of short beeps) before silencing.

## Alarm Memory

The memory light [MEM] on your keypad will illuminate if any alarm situations took place while your system was armed. A record of all alarm situations that occurred is stored in memory. After disarming the system, pressing once on the [MEM] key causes it to flash and brings up, in the keypad display, the alarm events that occurred during the last alarm period. (Alarm events consist of all zones that generated alarms.)

## SYSTEM PARTITIONING

By activating the panel's "partitioning" feature, zones can be divided into two distinct systems, with a shared fire zone (zone #3). Both systems are controlled by one panel, making partitioning a particularly useful feature in installations where shared security systems are more practical (i.e. office/warehouse, apartment/condo complexes).

## Partitioning

### Partition "on"

(Address **086**, key [8] "on")

Addresses **116, 118, 120, 122**:

Zones can be assigned to system "A" (addresses **116, 118** zone key "ON") and/or to system "B" (addresses **120, 122** zone key "ON"). A "common zone" is a zone that is not assigned to any system (it will be reported as a "System A" zone). It is armed only when both systems are armed, and disarmed if system "A" or system "B" is disarmed. A "dual zone" is a zone that is assigned to both systems (it will be reported as one of the system (either "A" or "B")). It is armed if either system "A" or system "B" is armed, and disarmed only when both systems are disarmed.

**Note: When partitioning is not activated (address 086, key [8] "off") any zones selected at addresses 116, 118 will be armed upon "stay" arming.**

### Keypad display:

Both systems are displayed on the keypad at the same time. In partitioning mode, when System "A" is armed, the [STAY] key flashes. If System "B" is armed, the [AWAY] key flashes. If both systems are armed, both of these keys will flash.

## Arming/Disarming

### Code definition:

Addresses **062, 064, 066:**

Addresses **068, 070, 072:**

Addresses **074, 076, 078:**

**Partition "on"** (Address **086**, key **[8]** "on")

Designates access codes that arm System "A" zones.

Designates access codes that arm System "B" zones.

Designates access codes that can "bypass" zones

CODE PRIORITY																	
KEY SELECT: [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] [12] [BYP] [MEM] [TRBL] [2ND]																	
062:	User #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	SYSTEM "A" / STAY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
064:	User #:	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
	SYSTEM "A" / STAY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
066:	User #:	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
	SYSTEM "A" / STAY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
068:	User #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	SYSTEM "B" / AWAY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
070:	User #:	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
	SYSTEM "B" / AWAY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
072:	User #:	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
	SYSTEM "B" / AWAY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
074:	User #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Codes with bypass access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
076:	User #:	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
	Codes with bypass access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
078:	User #:	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
	Codes with bypass access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

When a code is activated at both addresses (**062-066** and **068-072**), it can do the following:

- The code can fully arm the system. If the code is entered when systems "A" and "B" are disarmed, it will completely arm the system.
- The code can fully disarm the system. If the code is entered when system "A" and "B" zones are armed, it will completely disarm the system.
- When the system is partially armed (i.e. only System "A" or "B" is armed) entering this code will arm the other system.
- The code can be used to selectively arm/disarm System "A" or System "B" zones.  
Enter **[11]** + code to arm/disarm System "A" zones.  
Enter **[12]** + code to arm/disarm System "B" zones.

Note: Codes that are not selected at either address are disabled.

The master code can always access both systems and bypass zones.

- **System "A"** codes can stop sirens coming from **System "B"** zones (and vice versa), but will not disarm the other system.
- It is not possible to arm one system during the other system's **exit** delay.

Note: When partitioning is not activated, (address **086**, key **[8]** "off"):

Addresses **062, 064, 066** determines which access codes can activate "stay" arming.

Addresses **068, 070, 072** determines which access codes can activate "away" arming.

Addresses **074, 076, 078** determines which access codes can "bypass" zones.

## Keyswitch/push-button arming/disarming (PS1)

In parallel to keypads, a keyswitch or push button can be used to arm/disarm the system. (The *Esprit* PS1 can be installed in bedrooms or any other desired location.) Keyswitch/push button operation is enabled/disabled at address **086**, key **[3]**. Keyswitch can activate "regular" or "stay" arming, based on the definition assigned at address **086**, key **[2]**. (key **[2]** "off" = "regular" arming, key **[2]** "on" = "stay" arming) If "stay" arming is activated, the keyswitch/push button (PS1) cannot be used to disarm the system if it is in entry delay or if an alarm has been generated. In this case, the system can only be disarmed from a keypad. (When partitioning is activated, the keyswitch can be used to arm/disarm System "A" regardless of System "B" status. Pressing key **[11]** will arm System "A".) Pressing two keys on the PS1 simultaneously for 2 seconds will generate a "panic 1" alarm. (See "Keypad (Panic) Alarms" below).

## ZONE BYPASSING

Bypassed zones will not generate an alarm. Manual bypass arming is employed when a system user chooses not to arm the entire protected area. Only zones that have been defined as "bypass enabled" (addresses **124**, **126**) can be selected by the user (addresses **074**, **076**, **078**) during manual bypass arming. To bypass zones, enter **[BYP]** + a valid access code. **[BYP]** key will illuminate. When a zone light is on, it indicates that the zone has been bypassed. Pressing **[CLEAR]** erases all bypass entries and currently bypassed zones and exits the bypass mode. Zones to be bypassed should then be re-entered. If bypass information is correct, press **[ENTER]** to end and save bypass functions being programmed. **[BYP]** key will remain illuminated, indicating that some zones have been bypassed. To cancel the zone bypass "status" just entered, press **[BYP]** + a valid access code + **[CLEAR]**. Zone bypasses are automatically cancelled every time the system is disarmed, except in "24 hour" zones. If a "24 hour" zone is bypassed and the system is subsequently disarmed, the "24 hour" zone will remain bypassed.

**Note:** If partitioning is used, zones assigned to the other system cannot be bypassed if the system is armed.

## Bypass Recall

This feature permits system users to reinstate the latest zone bypass instructions saved in memory. By pressing **[BYP]** while in bypass programming mode, previous bypass status is re-established. Even if a user is in the process of entering new bypass information on keypad, one touch of the **[BYP]** key overrides new information and reinstates the preceding zone bypass instructions saved. (The fire zone cannot be bypassed.)

## CHIME ZONES (applies only to 616, 626, 629 and 633 keypads)

Chime zones report a presence (movement or door opening) in selected zones by emitting a distinctive, rapid intermittent beep. Each keypad is independently "chime" programmed and must be reprogrammed in the event of total power loss. To enable a zone's chime feature on a LED keypad, press the desired zone key from **[1]** to **[6]** until a rapid intermittent beep is heard. To enable the chime feature of the keypad zone connected to the particular LED keypad, use key **[8]**. To disable a zone's chime feature on a LED keypad, press on the appropriate key until a steady beep is heard. To disable the LED keypad sounder (mute), press key **[9]**.

## KEYPAD (PANIC) ALARMS

These panels provide three keypad "panic" zones. Keys must be pressed simultaneously for 2 seconds in order to activate. (Pressing 2 keys on the PS1 for 2 seconds generates a "panic 1" alarm.)

Alarm	Press keys	Alarm Code	Silent/Audible	Silent/Fire
Panic 1	<b>[1] &amp; [3]</b>	Add. <b>513</b> (SECTION 64)	Add. <b>088</b> , Key <b>[4]</b>	
Panic 2	<b>[4] &amp; [6]</b>	Add. <b>514</b> (SECTION 64)	Add. <b>088</b> , Key <b>[5]</b>	
Panic 3	<b>[7] &amp; [9]</b>	Add. <b>515</b> (SECTION 64)		Add. <b>088</b> , Key <b>[6]</b>

## TROUBLE DISPLAY/MONITORING

Trouble status is continuously monitored by the panels which can recognize and display 10 different trouble conditions on the keypad or in *Esplod*, and report 8 to the central station. (To send "trouble status reports" to the central, 2-digit trouble report codes should be programmed.) When trouble conditions occur, **[TRBL]** illuminates and if "trouble warning" is enabled (address **090**, key **[9]** "on") the keypad will beep intermittently. Press **[TRBL]** to switch keypad to "trouble display" mode. **[TRBL]** flashes. Keys that are "on" indicate current trouble conditions. Press any key to return keypad to normal display.

**Key [1]                      *No battery/low battery***

Panel battery is disconnected, or capacity is low. Panel conducts dynamic battery test under load every 60 seconds. Key [1] "on" indicates battery is disconnected, or battery should be replaced because it won't provide adequate back-up current in event of AC loss. Trouble indicator [1] **also** comes "on" if battery voltage drops to 10.5 volts while panel is running on battery power (with no AC).

**Key [2]                      *Power failure***

Activates when inadequate AC power goes to panel **or** the power supply is unable to charge battery **or** the power supply voltage exceeds 14.9V. A report can also be sent to the central, and "power failure" report delay time is programmable at address **054**. Delay duration can be from 001 - 255 minutes (factory default = 30 min). **When a "power supply failure" trouble occurs, the [TRBL] key flashes rapidly.** To remove "power failure" from trouble display, key [2ND] should be "on" at address **090**.

**Key [4]                      *Bell disconnect***

Bell is not connected to bell output. Note: When connecting bell to optional relay output, trouble indicator [4] is "on" constantly. To avoid this, connect a 1K $\Omega$  EOL resistor on bell output. If an internal siren is connected to bell output, and an external siren to relay, the panel will only recognize the existence of the internal siren.

**Key [5]                      *Maximum bell current***

The bell output is microprocessor-controlled and will automatically shut down if current exceeds 3 amps upon an alarm. After opening the short or reducing the load, bell shutdown will end as soon as another alarm is triggered.

**Key [6]                      *Maximum auxiliary current***

Processor has recognized that auxiliary output current exceeds 3A. This causes automatic shutdown of auxiliary output. After opening the short or reducing the load, power will be automatically restored to the auxiliary output after battery test has been conducted (within 60 seconds).

**Key [7]                      *Communicator report failure***

The control panel has unsuccessfully attempted to initiate communication with the central. Report failure is stored in "event list" memory.

**Key [8]                      *Timer loss***

After total battery/AC power failure, the timer must be reprogrammed.

Press [ENTER] + installer/master/user 1 code + [MEM]. Key [MEM] flashes. Enter two digits (00 to 23) for hours, followed by 2 digits (00 to 59) for minutes. Press [ENTER] or [CLEAR] to exit.

**Key [9]                      *Tamper/zone wiring failure***

A zone line cut/line short has occurred. Tamper/wiring recognition must be activated at address **088** if this feature is required. EOL resistors must be used for zone connection, it provides line short recognition.

**Key [10]                      *Telephone line monitor***

Telephone line cannot be found for 30 seconds. "Telephone line monitor" is enabled at address **086**. This trouble condition can also trigger an alarm if the system is armed. It will also be stored in "event list". Restoration of telephone line can be reported by programming address **511**.

**Key [11]                      *Fire trouble***

The zone wire has been cut on zone 3 (when its zone definition is "24 hour fire"). Fire zone key [3] also flashes. If programmed at address **500**, it will be reported to the central.

**PROGRAMMING MASTER AND USER CODES** *(factory default master 474747)*

[ENTER] + Master/user 1 code.

Enter 2 digit code number + new code (4 or 6 digits from 0 to 9 + [ENTER] when 4 digits are used.

Press [2ND] if you want to erase a code).

**Master code = 00 ([10][10])** Full access to all system functions.

**User codes = 01 - 48**

*(01 - can modify access codes. All user code priorities can be programmed at addresses 062 to 066, 068 to 072, and 074 to 078, using the installer code.)*

Note: [2ND] key flashes if location is empty (no code programmed).

## KEY ACCESS PROGRAMMING

*Programs features quickly, without entering addresses or section numbers.*

To activate "key access programming", press **[ENTER]**, followed by installer, master or user code 1. (Access code required depends on the feature you wish to access - see below.) Then press the key corresponding to the desired feature. Press **[ENTER]** or **[CLEAR]** to exit.

**key**

- [8] Installer test mode** *(installer code only)*  
In installer test mode, a confirmation beep (intermittent) indicates test is "on", a "rejection" beep (long) indicates test is "off". The bell will squawk during walk testing to indicate opened, functional zones.
- [9] "Auto arming" time program** *(all 3 codes)*  
Key **[9]** flashes. Enter two digits (00 to 23) for hours, followed by 2 digits (00 to 59) for minutes.
- [MEM] "Panel time" and clear "trouble 8"** *(all 3 codes)*  
Key **[MEM]** flashes. Enter two digits (00 to 23) for hours, followed by 2 digits (00 to 59) for minutes.
- [BYP] Test report** *(all 3 codes)*  
Reporting is enabled at address **086** keys **[11]**, **[12]**. A value must be entered at address **512**, and both telephone and account numbers must be programmed.
- [TRBL] Call Espload via telephone** *(all 3 codes)*  
Panel identifier, PC password (addresses **004-007**) and computer telephone number (addresses **008-015**) must be programmed.
- [AWAY] Answer Espload** *(all 3 codes)*  
This feature is available when using the ADP-1 adapter. In Espload, "blind dial" must be activated in "modem setup" section, and panel phone number must be programmed (works also without ADP-1).
- [STAY] Cancel communication attempts** *(master code and user 1 can only stop calls to Espload)*  
Until next reportable event *(installer code - all communications)*

When communicating with Espload, it is impossible to enter programming mode.

## "POWER-DOWN" RESET

- (1) Remove battery and AC to power down the unit.
- (2) Connect a jumper between "reset jumper" pins.
- (3) Connect AC then battery.
- (4) Wait 10 seconds.
- (5) Remove jumper.

Factory default installer and master codes will be reinstated. Values entered at addresses **008-043**, **062-126**, **300-527**, as well as all user codes, will be erased (**[2ND] [2ND]**). Programmed values of all other addresses do not change.

### WARRANTY

The Seller warrants its products to be free from defects in materials and workmanship under normal use for a period of one year. Except as specifically stated herein, all express or implied warranties whatsoever, statutory or otherwise, including without limitation, any implied warranty of merchantability and fitness for a particular purpose, are expressly excluded. Because Seller does not install or connect the products and because the products may be used in conjunction with products not manufactured by Seller, Seller cannot guarantee the performance of the security system. Seller obligation and liability under this warranty is expressly limited to repairing or replacing, at Seller's option, any product not meeting the specifications. In no event shall the Seller be liable to the buyer or any other person for any loss or damages whether direct or indirect or consequential or incidental, including without limitation, any damages for lost profits stolen goods, or claims by any other party, caused by defective goods or otherwise arising from the improper, incorrect or otherwise faulty installation or use of the merchandise sold.

## PROGRAMMING INFO

### BENCH TEST *(Refer to "Wiring Diagram" in the "Programming Guide".)*

1. To set zones in non-alarm state (keypad zone lights off), install 1K OHM resistors across zone terminals.
2. Connect keypad. Install 1K OHM resistor across keypad zone.
3. Connect sounder or install 1K OHM resistor across "BELL" terminal.
4. Connect AC. Connect battery.
5. [TRBL] key illuminates, due to timer loss. Push [TRBL] to view trouble conditions.
6. All keypad lights except [TRBL] should be off and keypad should respond to Master code arming and disarming.
7. Master Code: *default 474747*.
8. Keypad Programming.

### HEXA PROGRAMMING

*(Used to program "Access to Upload/Download" and "Installer Code")*

*All digits from 0 to F are valid. (See Interpreting Hexa Values)*

*Programming values are programmed into memory locations from address 000 to 043 and 300 to 527.*

- 1) Press [ENTER] + installer code.
- 2) Key [ENTER] will flash (programming mode).
- 3) Enter 3 digit memory address.
- 4) Enter 2 digit data (See Hexa Display to read value).
- 5) Go to step 3 for next address.

*To exit programming mode press [CLEAR].*

### STREAMLINED PROGRAMMING

*(Used to program sections 00 to 67)*

- 1) Press [ENTER] + installer code + [7].
- 2) Key [ENTER] and [2ND] will flash.
- 3) Enter 2 digit section number (00-67).
- 4) Enter 8 digits to program the section.
- 5) Keypad will beep verifying data entry. Data is saved and the next section is advanced to automatically.
- 6) Go to step 4 for next address.
- 7) To select a specific section, press [CLEAR] or [ENTER] and go to step 3.

*To exit programming mode press [CLEAR].*

### FEATURE SELECT PROGRAMMING

*Feature selection programming addresses 062 to 126. The "ON"/"OFF" status of the lights (keys) determines features selected.*

- 1) Press [ENTER] + installer code.
- 2) Key [ENTER] will flash.
- 3) Enter 3 digit memory address (062 to 126).
- 4) Press corresponding key to select option.
- 5) To change selection press key again.
- 6) To save press [ENTER].
- 7) Repeat steps 3 to 5 for addresses 062 to 126.

*To exit programming mode press [CLEAR].*

### DECIMAL PROGRAMMING

*Decimal value programming addresses 044 to 061. Values entered must contain 3 digits.*

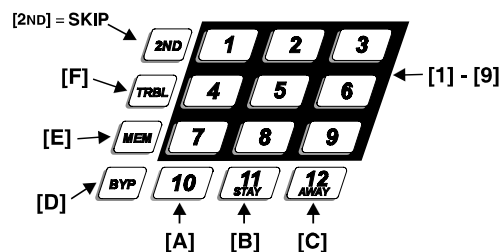
- 1) Press [ENTER] + installer code.
- 2) Key [ENTER] will flash.
- 3) Enter 3 digit address (044 to 061).
- 4) Enter 3 digit DECIMAL value (See "Decimal Display" to read value).
- 5) Go to step 3 for next address.

*To exit programming mode press [CLEAR].*



## INTERPRETING HEXA VALUES

KEY	HEXA VALUE	DECIMAL VALUE
[1] - [9]	1 - 9	1 - 9
[10]	A	0
[11]	B	11
[12]	C	12
[BYP]	D	13
[MEM]	E	14
[TRBL]	F	15
[2ND]	skip, null (0)	



## MASTER AND USER CODES

(default master **474747**)

To create a new access code:

- 1) Press **[ENTER]**
- 2) Enter master / user 1 code
- 3) Enter 2 digit code number, 00 to 48
- 4) Enter new code (4 or 6 digits, 0 to 9)
- 5) To save, press **[ENTER]** (only if 4 digits are used.)

**Master code = 00 ([10][10])** Full access to all system functions.

**User codes = 01-48** (01-can modify access codes. All user code priorities can be programmed at addresses **062** to **066**, **068** to **072**, and **074** to **078** with the installer code.)

Note: **[2ND]** key flashes if location is empty.

To erase a code:

- 1) Press **[ENTER]**
- 2) Enter master / user 1 code
- 3) Enter Code Number
- 4) Enter **[2ND]**.

## HEXA DISPLAY

If key is lit = 8 = 4 = 2 = 1



If key is lit = 8 = 4 = 2 = 1

No light = 0 = **SKIP** (empty)

Value of  
2<sup>ND</sup> digit = A  
(8 + 2 = A)

Value of  
1<sup>ST</sup> digit = 3  
(2 + 1 = 3)  
VALUE = "3A"

## TROUBLE DISPLAY

Key "ON" =

- |                            |                                   |
|----------------------------|-----------------------------------|
| [1] No battery/low voltage | [7] Communicator report failure   |
| [2] Power failure*         | [8] Timer loss**                  |
| [4] Bell disconnect        | [9] Tamper or zone wiring failure |
| [5] Maximum bell current   | [10] Telephone line failure       |
| [6] Max auxiliary current  | [11] Fire loop trouble            |

\*When a "power supply failure" trouble occurs, the **[TRBL]** key flashes rapidly.

\*\*To clear timer loss trouble, see *Key Access Programming* **[MEM]** in Programming Guide. Press **[CLEAR]** to clear troubles.

## DECIMAL DISPLAY

If key is lit = 8 = 4 = 2 = 1

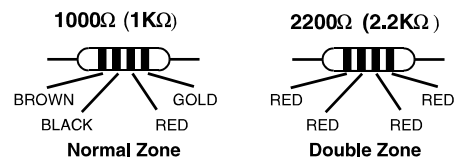


If key is lit = 128 = 64 = 32 = 16

Total value (57)  
(8 + 1 + 32 + 16 = 57)

No light = 0

## RESISTOR GUIDE



**FCC WARNINGS****ESPRIT 748ES****IMPORTANT INFORMATION**

This equipment complies with Part 68 of the FCC rules. Inside the cover of this equipment is a label that contains, among other information, the FCC registration number of this equipment.

**NOTIFICATION TO TELEPHONE COMPANY**

Upon request, customer shall notify telephone company of particular line to which the connection will be made, and provide the FCC registration number and the ringer equivalence of the protective circuit.

**FCC REGISTRATION NUMBER:** 5A7CAN-22633 - AL - E  
**RINGER EQUIVALENCE NUMBER:** 0.1B  
**USOC JACK:** RJ31X (USA), CA31A (CANADA)

**TELEPHONE CONNECTION REQUIREMENTS**

Except for telephone company-provided ringers, all connections to the telephone network shall be made through standard plugs and telephone company-provided jacks, or equivalent, in such a manner as to allow for easy, immediate disconnection of terminal equipment. Standard jacks shall be so arranged that, if plug connected thereto is withdrawn, no interference to operation of equipment at customer's premises which remains connected to telephone network shall occur by reason of such withdrawal.

**INCIDENCE OF HARM**

Should terminal equipment/protective circuitry cause harm to telephone network, telephone company shall, where practicable, notify customer that temporary disconnection of service may be required; however, where prior notice is not practicable, the telephone company may temporarily discontinue service if action is deemed reasonable in circumstances. In case of temporary discontinuance, telephone company shall promptly notify customer and will be given opportunity to correct the situation.

**CHANGES IN TELEPHONE COMPANY EQUIPMENT OR FACILITIES**

The telephone company may make changes in its communication facilities, equipment operations or procedures, where such actions are reasonably required and proper in its business. Should any such changes render customer's terminal equipment incompatible with the telephone company facilities, the customer shall be given adequate notice to effect the modifications to maintain uninterrupted service.

**GENERAL**

This equipment shall not be used on coin telephone lines. Connection to party line service is subject to state tariffs.

**RINGER EQUIVALENCE NUMBER (REN)**

The REN is useful to determine the quantity of devices that you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, sum of the REN's of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices that you may connect to your line, you may want to contact your local telephone company.

**EQUIPMENT MAINTENANCE FACILITY**

If you experience trouble with this telephone equipment, please contact facility indicated below for information on obtaining service or repairs. The telephone company may ask that you disconnect this equipment from network until problem is corrected or until you are sure that the equipment is not malfunctioning.

**U.S. POINT OF CONTACT:**

Wackenhut International Inc.  
 10446 N.W. 31 terrace  
 Miami, Florida  
 33172 USA 1-305-994-8167

**FCC PART 15, WARNINGS****INFORMATION TO USER**

This equipment has been tested and found to comply with the limits for Class B digital devices, pursuant to Part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to equipment intermittently, the user is encouraged to try to correct the interference by one or more of the following measures: (1) reorient or relocate the receiving antenna; (2) increase the separation between the equipment and receiver; (3) connect the equipment to an outlet on a circuit other than the one to which the receiver is connected, or (4) consult the dealer or an experienced radio/tv technician for assistance.

**CAUTION:**

**Changes or modifications not expressly approved by PARADOX SECURITY SYSTEMS could void the user's authority to operate the equipment.**

**ATTACHMENT LIMITATION NOTICE****ESPRIT 748ES**

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

**CAUTION:** Users should not attempt to make such connections themselves, but should contact the appropriate electrical inspection authority, or electrician, as appropriate.

The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all of the devices does not exceed 100. The Load Number of this unit is **33**.

Industry Canada certification is only applicable to installation of devices which include transformers approved by the Canadian Standards Association (CSA).

**RESTRICTIONS CONCERNANT LE RACCORDEMENT DE MATÉRIEL**

L'étiquette d'Industrie Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme à certaines normes de protection, d'exploitation et de sécurité des réseaux de télécommunications. Le Ministère n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêchent pas la dégradation du service dans certaines situations.

Les réparations de matériel homologué doivent être effectuées par un centre d'entretien canadien autorisé désigné par le fournisseur. La compagnie de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectués par l'utilisateur ou à cause d'un mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

**AVERTISSEMENT:** L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un électricien, selon le cas.

"L'indice de charge (IC) assigné à chaque dispositif indique, pour éviter toute surcharge, le pourcentage de la charge totale qui peut être raccordée à un circuit téléphonique bouclé utilisé par ce dispositif. La terminaison du circuit bouclé peut être constituée de n'importe quelle combinaison de dispositifs, pourvu que la somme des indices de charge de l'ensemble des dispositifs ne dépasse pas 100." L'indice de charge de ce produit est **33**.

La certification d'Industrie Canada s'applique seulement aux installations d'appareils utilisant un transformateur approuvé par l'Association Canadienne de Normalisation (CSA).

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